Earth Circles

The Fruitful Garden

LESSON 2: THE THREE SISTERS

OVERVIEW:

Concept: All individuals are unique, plants as well as people. Working together, we can make this world a better place.

Background for Teachers

LESSON AT A GLANCE:

Materials
Preparation

LESSON PLAN

Opening Circle

Activity: Kids prepare mounds of dirt and sow seeds of corn, beans and squash in the mounds, according to Native American tradition. They set up plant supports on each mound and add labels. They may make posters to explain the Three Sisters concept.

Discussion
Story
Principles in Practice

Closing Circle

Copyright (C) 2019, Maureen Oates

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Background

The Three Sisters is a companion planting plan, used for thousands of years by many Native American nations. The Three Sisters combine the unique characteristics of corn, pole beans and squash to make a healthier garden and provide more nutrition for their people than if the seeds were planted separately.

These three plants, corn, beans and squash, complement each other both in their growing patterns, their needs for growth, and with the nourishment they provide. Corn grows strong and tall, but is a “heavy feeder”, meaning it requires lots of nutrients, and especially nitrogen to grow. Pole beans need a structure to climb (such as the corn). It is a legume which actually ‘fixes’ its own nitrogen. This means it can draw nitrogen from the air and convert it into a nitrogen compound that the corn and bean plants can use. Finally, squash spreads out with large leaves that cover up the bare soil around the corn and beans, conserving soil moisture and suppressing weeds.

Nutritionally, corn is a primary source of carbohydrates. Dried beans provided protein. Squash contains valuable vitamins. We need carbohydrates for energy, protein for growth, strength, and body maintenance, and vitamins and minerals for vitality and health.

In contrast, monoculture is the modern practice of planting extensive acres of farm land with just one crop. Chemical fertilizers are used to replenish nutrients in the soil. Insecticides are used to control pests. The lack of trees and shrubs discourages wildlife that use them for food and shelter. It is a system that is totally at odds with nature.

Organic vegetable gardening is a way we can all care for Earth while providing better nourishment for ourselves and for those less fortunate.

If you want to do more reading, these are excellent sources of information.
www.reneesgarden.com/articles/3**sisters**.htmlhttp://www.kidsgardening.com/growingideas/projects/march02/mar02-pg1.htm

Copyright (C) 2019, Maureen Oates

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Materials:

For gardening:

- Trowels, 4-6
- 2-3 garden rakes
- 2-3 mid-sized shovels or digging forks
- 2 large Hula Hoops, 2 smaller hoops 18” diameter
- 2 yard sticks
- 4 soaked corn seeds for each mound you intend to plant
- Bean and squash seeds
- Compasses

For signage:

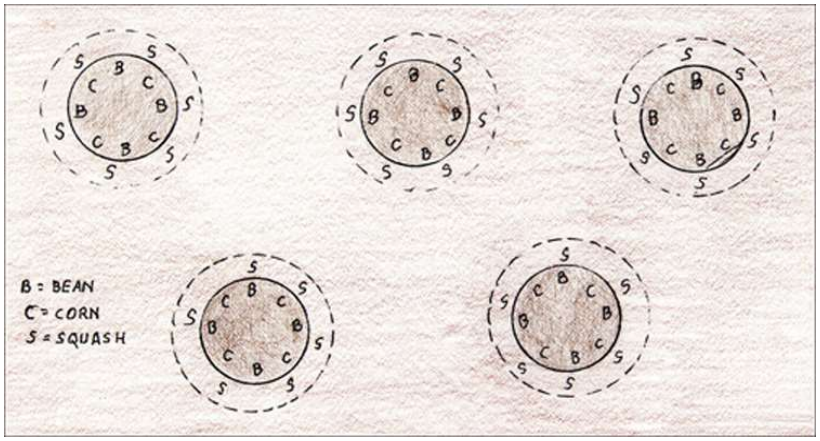
- Poster board
- Colored markers or poster paint and brushes
- Stakes and Sharpies for labels

Book: Joseph Brochac, *Keeper of the Plants*

Preparation:

- Gather the tools and supplies outside near the work area.
- Learn the Sun Salutation so you can lead without looking at the sheet.
- Prepare one demonstration mound for the Kids to see what they are trying to create.
- Set up a sign- making area (inside or out) with poster board, markers or paint and brushes.
- Make a list of the labels you need and signs to put in your garden.
- Place boards, stepping stones, bricks, whatever you have available for Kids to walk on while gardening to avoid compacting the soil.
- A Three Sisters video is available for your information or to share with the Kids. https://www.youtube.com/watch?v=hJMnsqVQ3dU

It may be useful to make a garden plot plan to figure out how the garden will shape up:



Copyright (C) 2019, Maureen Oates

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

LESSON PLAN:

Opening Circle:
Greet the Kids and note who is present.
You may begin by asking how many of the Kids have had their own garden or planted flowers or vegetables and tended them in the family garden. Was it a good experience? Were they successful gardeners? Was it fun?

Discussion:

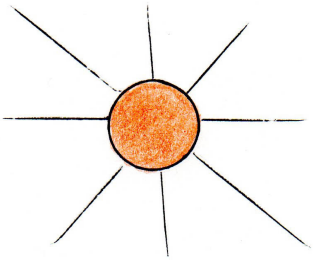
Next, explain that today we are going to begin planting our Three Sisters Garden. Some of the Kids may be familiar with this type of garden. Ask them what they know.

- What plants are in the Three Sisters garden? (corn, pole beans, squash)
- Where did growing these plants together originate? (Native American nations)
- Why do they grow better when planted together rather than by themselves? (Each adds different things to the soil and takes different things from it.)
- Compare this type of planting with our typical form of agriculture—monoculture.
- Ask the Kids how this might be like being part of a community of people.
    - Like people, plants grow best in community.
    - Each plant is special and contributes its unique gifts, as we all try to do.

Sun Salutation:

If you used the Sun Salutation during the Garden Prep lesson in the Fall, ask the Kids if they remember it. Do they remember what it means? Tell them we will be doing it again today.

Take the Kids outside. Tell them that gardening requires us to use our whole bodies. To warm up our bodies and to celebrate the light and energy we receive from the sun, we will do a Sun Salutation. See diagrams in the introduction. You may want to provide a copy to each Kid, or simply have them follow your lead. End the salutation with hands in prayer position, a slight bow, and “Namaste.”



Copyright (C) 2019, Maureen Oates

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Gardening Activity:

Tell the Kids that now we can prepare the garden area for planting and then sow some seeds. We also may make plot labels and some posters about the Three Sisters plan.

Explain to the Kids:

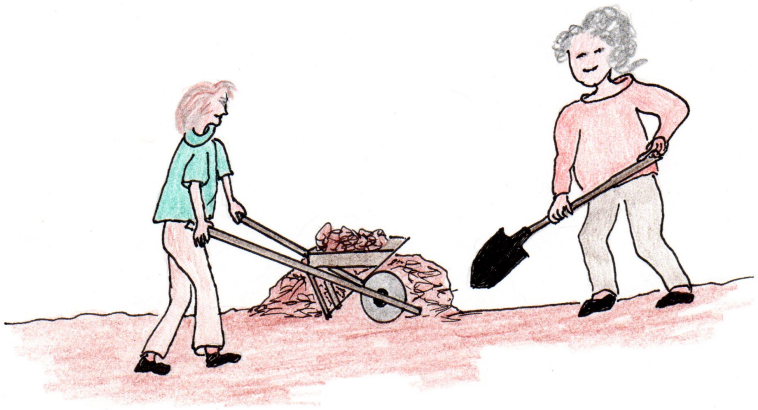
- The most important thing we can do is not walk on the garden beds where we want the plants to grow.
- If boards or stones are already placed in the garden, show these paths to the Kids and explain why these are the only places they should step when in the garden. They can also step on nearby gravel, grass, wood chips, or whatever is used for paths and surrounds the garden

Action:

Have the Kids work in teams of two or three. If your group is large, you may want to have some Kids work on sign making while others make their mounds, and switch tasks as time allows. Provide each team with a rake and trowels or shovels. Assign each team one or more mounds to create and specific locations to place them, based on your garden plan and the number of teams you have.

Weeding the garden space: Using forks, hoes, or trowels, have everyone work together for ten minutes to remove weeds from the space.

Building mounds: Demonstrate building a mound. Use the hula hoop as a stencil to space the mounds apart and form their circles. Inside the circles rake loose soil into a low round hill about three feet across and up to a foot high. Pat it down gently with a trowel or your hands to hold it in place.



Copyright (C) 2019, Maureen Oates

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Give each group of two or three Kids two or three specific mounds to create in assigned spaces, based on your plot plan. If the class is too large for all Kids to work on mound building at the same time, have half of the class work on sign making to start and switch with mound builders half way through the period.

Sowing seeds: When mounds are ready, remind Kids of the Three Sisters plan and ask how they think seeds should be placed in the mounds. Use background information to discuss with the Kids the role each plant fills and how the plants support each other. Be sure Kids realize that where the seeds are placed in the mound matters and why.

- For each mound provide teams with four or five corn seeds, four or five bean seeds, and four or five squash seeds. Remind the Kids that corn seeds go in the center of the mound, each about 8-10 inches apart. Bean seeds go in a ring around the corn. Squash seeds go in the spaces between the mounds.
- To plant a seed, a Kid uses a finger or a small stick to make a hole in the mound an inch or so deep, drops a seed into the hole, then gently covers the hole with soil.
- After the mound is completely planted, water fully so that the water soaks deeply into the soil. *Note:* Make sure the Kids do not pack the soil down so firmly that water just runs off the sides. The soil needs to be loose enough for water to soak in quickly as it is sprayed on.

.

Copyright (C) 2019, Maureen Oates

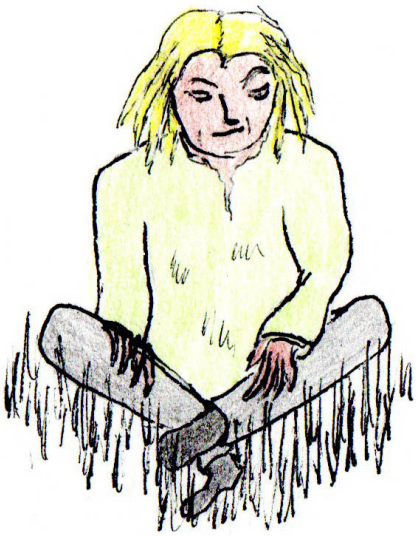
This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Sign Making: Signs are needed to label mounds with the Kids' names for each mound. If you have a large group of students and they can't all work on mounds at the same time, have half of the group work on their signs while the rest start by building their mounds and sowing their seeds. Then switch mound builders and sign makers, allowing both time to complete the tasks. Some Kids also may want to create posters that explain the Three Sisters Garden to place outdoors near their garden..

When finished sowing seeds, Kids return to the classroom and wash up. If the signs are not finished, sign makers may listen while they continue to work

Story: *The Corn Spirit,* Bruchac, Joseph, *Native Plant Stories*

This magical story portrays the consequences of taking a food supply for granted and the need for a community to work together for the benefit of all.



Discussion

- Who grows the green plants that are the basis of our food chain?
- How does our food get to the market where we buy it?
- How much of our own food might we grow?

Copyright (C) 2019, Maureen Oates

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Principles in Practice:

Ask the Kids which Principles were practiced today.

- Do the plants demonstrate any specific Principles when they are planted as a community?

- How might we emulate the plants in our lives? (being ourselves, sharing space, sharing resources, helping each other.)

Closing Circle:

Ask all present to repeat these words together:

Let the words of my mouth

The meditations of my heart

And the actions of my life be as one

That I may live in harmony with Mother Nature. Amen.

Jennifer Frost Butler, *Earth Prayers*

Copyright (C) 2019, Maureen Oates

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.